Users Manual

Model No.: M224A

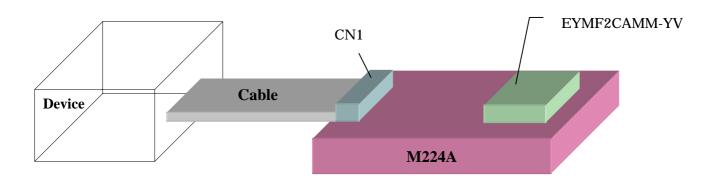
FCC ID: BKMFBM224A

SEIKO EPSON CORPORATION

Equipment Description:

M224A is the interface board connects Bluetooth module and the Printer. M224A contains "CN1", I/O connector for the Printer, and "EYMF2CAMM-YV", Bluetooth Module made by Taiyo Yuden Co., Ltd.

Model Name: M224A

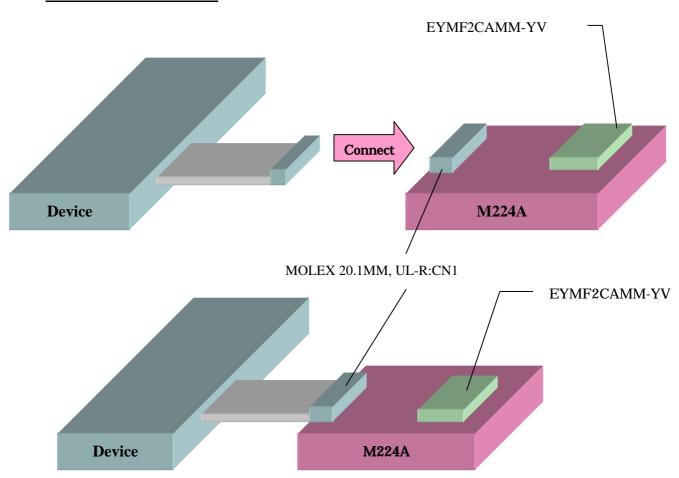


<CAUTION>

* The following sentence has to be displayed on the outside of the device in which the module is installed: "Contains Transmitter Module FCC ID: BKMFBM224A", or "Contains FCC ID: BKMFBM224A"

* Please note that this users manual (installation instruction) should no be provided to end-users.

How to Built - In:



^{*}Please prepare the cable complied with CN1.

This document consists of 2 parts.

- <Part 1> Pin Description of Connector (CN1) for M224
- <Part 2> Users Manual for "EYMF2CAMM-YV"

<Part 1>

Pin Description of connector (CN1) for M224A Bluetooth Interface connector signal assignments and functions

Pin	Signal name	Signal direction	Function
number			
1	VCC	-	Power supply(+3.3V)
2	VCC	-	Power supply(+3.3V)
3	MODE_SEL	Input	This signal sets the operating mode of Bluetooth module
		·	L: Automatic mode
			H: Command mode
4	PWROK	Input	Reset signal input
5	(Reserved)	-	Not used
6	LINK	Output	This signal indicates the state of connection between master device and this unit
7	UIBTYP1	Output	This signal indicates the type of interface
8	UIBTYP2	Output	This signal indicates the type of interface
9	RSTUIB	Input	Reset signal input
10	(Reserved)	-	Not used
11	(Reserved)	-	Not used
12	RTS	Output	This signal indicates whether the Bluetooth interface board is busy
13	NC	-	Not used
14	DTR	Input	This signal indicates whether the Bluetooth interface board can send data to printer
15	RxD	Input	Receive data
16	TxD	Output	Transmit data
17	RSTOUT	Output	Not used(Fixed to H)
18	GND	-	Ground
19	GND	-	Ground
20	GND	-	Ground

No. HD-SH-GT02224-A 受付 041102

New Change

新規·変更

User's Manual

ユーザーズマニュアル

EYMF2CAMM-YV

Module name

品名

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Submitted by TAIYO YUDEN Co.,Ltd.

太陽誘電株式会社 モジュール事業部 無線技術部

DATE:

APPROVED	DES.REVIEW	CHECKED	DESIGNED
品証承認	設計承認	確認	担当

Control No.		Control name	APPROVED	CHECKER	DRAWN	DESIGNE
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HD-SH- GT02224		ユーザーズマニュアル				
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Revision No. 改訂経歴	Designed 担当	Rectification record 変更経歴			Checked 確認	Approved 承認
New document 初版		Newly issued 新規作成				
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	User's Manual				
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GT 0 2 2 2 4	ユーザーズマニュアル				
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(2) Document constituent list

構成書類リスト

Control No. 書類番号	Document page 構成ページ
HD-AG-A041102	1/6 ~ 6/6
HD-AM-A041102	1/1
HD-AD-A041102	1/3 ~ 2/3
HD-BA-A041102	1/1
	1/1
	書類番号 HD-AG-A041102 HD-AM-A041102 HD-AD-A041102

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(1) Scope

適用

This specification ("Specification") applies to the hybrid IC "EYMF2CAMM-YV" for use *Bluetooth*® module ("Product") manufactured by TAIYO YUDEN Co.,Ltd. ("TAIYO YUDEN")

本仕様書は、太陽誘電株式会社("弊社")により製造される Bluetooth®用ハイブリッドIC "EYMF2CAMM-YV" ("本製品")に適用する。

(2) Description

内 容

① Model name: EYMF2CAMM-YV型 番: EYMF2CAMM-YV

② Function: Radio frequency transceiver Module (power class2, *Bluetooth*® standard Ver1.1 conformity) 機能:無線通信モジュール(出力 Class2、*Bluetooth*® 規格 Ver1.1 準拠)

③ Application: PDA, Barcode Reader and Pos 用途: PDA. Barcode Reader and Pos

 $\ensuremath{\textcircled{4}}$ Structure: Hybrid IC loaded with silicon monolithic semiconductor

構 造:シリコンモノリシック半導体を用いた混成集積回路

Ability of lead free mounting at customer's assembly (Heat resistance of this Product) :Yes お客様での Pb フリー実装可否(本製品の耐熱性) : 可能

Containment of hazardous substance in this Product

* RoHS regulation substance(Pb.Cd.Hg.Cr+6.PBB.PBDE) :Non use

本製品内の環境物質含有

*RoHS 規制物質(Pb.Cd.Hg.Cr+6.PBB.PBDE) : 未使用

⑤ Outline : 34-pin leadless chip carrier

外 形:34ピン リードレスチップキャリア

⑥ Marking : Model name, BD_ADDR, Lot No. and manufacturer on Shielding Case

表 示 : シールドケース上に、品名, BD_ADDR, ロット No., 製造会社名を印字

7 Notes:

その他:

a. Limitation of Warranty

保証

i) TAIYO YUDEN provide warranties only if the Product is operated under the condition set forth in this Specification.

Please note that TAIYO YUDEN shall not be liable for any defect and/or malfunction arising from use of the Product under the terms and conditions other than the operating conditions hereof.

本製品の保証使用条件は本仕様書の通りです。

本保証条件以外の条件で御使用になった結果発生した不良・不具合につきましては、弊社は責任を負い兼ねますので御了承下さい。

The *Bluetooth*® word mark and logos are owned by the *Bluetooth*® SIG, Inc. and any use of such marks by TAIYO YUDEN CO., LTD. is under license.

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ii) This Product is designed for use in products which comply with *Bluetooth*[®] Specifications (Ver.1.1) ("Bluetooth Specifications"). TAIYO YUDEN disclaims and is not responsible for any liability concerning infringement by this Product under any intellectual property right owned by third party in case the customer uses this Product in any product which does not comply with *Bluetooth*[®] Specifications (the "non-complying products"). Furthermore, TAIYO YUDEN warrants only that this Product complies with this Specification and does not grant any other warranty including warranty for application of the non-complying products.

本製品はBluetooth®の規格(Ver.1.1)に従って製造された製品であり、本製品の用途がBluetooth®規格以外もしくは当該規格に従わない製品(「Bluetooth®規格外製品」)への使用の場合、弊社は第三者の知的財産権の侵害に基づくいかなる責任を負いません。また、弊社は本製品が本仕様書に準拠することのみを保証するもので、上記Bluetooth®規格外製品への応用についての保証等いかなる保証を行うものではありません。

b. Instruction for Use (CAUTION)

使用上の注意事項

 Because Product is not designed for radiation durability, please refrain from exposing Product to radiation in the use.

本製品は、耐放射線設計をしておりませんので、放射線のストレスを受ける環境下での使用は避けて下さい。

ii) Communication between this Product and other might not be established nor maintained depending upon radio environment or operating condition of this Product and other products with *Bluetooth*® wireless technology.

本製品と本製品又は他製品の通信は、周囲の電波環境及び機器環境により確立又は維持し難くなることがあります。

iii) This Product operates in the unlicensed ISM band at 2.4GHz. In case this Product is used around the other wireless devices which operate in same frequency band of this Product, there is a possibility that interference occurs between this Product and such other devices. If such interference occurs, please stop the operation of other devices or relocate this Product before using this Product or do not use this Product around the other wireless devices.

本製品は 2.4GHz 帯の周波数を使用しています。本製品を本製品と同じ周波数を使用した他の無線機器の周辺でご使用になりますと、本製品とかかる他の無線機器との間で電波干渉が発生する可能性があります。電波干渉が発生した場合、他の無線機器を停止するか、本製品の使用場所を変えるなど電波干渉の生じない環境でご使用下さい。

iv) This Product mentioned in this Specification is manufactured for PDA, Barcode Reader and Pos. Before using this product in any special equipment (such as medical equipment, space equipment, air craft, disaster prevention equipment), where higher safety and reliability are duly required, the applicability suitability, or fitness for particular purpose of this Product must be fully evaluated by the customer at its sole risk to ensure correct and safety operation of those special equipments. Also, evaluation of the safety function of this Product even for use in general electronics equipment shall be thoroughly made and when necessary, a protective circuit shall be added in design stage, all at the customer's sole risk.

本仕様書に記載されている本製品は、PDA、Barcode Reader、Pos 向けとして製造されております。従って、高度の安全性や信頼性が求められる医療用機器、宇宙用機器、あるいは防災機器等にお使いになるときには、本製品の適用可能性、相応性、特定目的に対する適合性をお客様の独自の責任で十分に評価、検討され、御判断下さい。

又、一般機器において御使用になる場合にも、お客様の独自の責任で十分な安全性評価を実施され、必要に応じて設計時に保護回路等を追加してください。

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- c. Term of Support サポート条件
 - i) Customer are requested to fully check and confirm by the start of mass production of this Product that (1)no bug, defect or other failure is included in firmware incorporated in this Product ("Incorporated Software"),(2)no bug, defect or other failure arising from installation of this Product in which is contained Incorporated Software into customer's products is included in Incorporated Software, and that Incorporated Software fully meets customer's intended use, although TAIYO YUDEN sufficiently inspects or verifies quality of Incorporated Software. TAIYO YUDEN warrants that TAIYO YUDEN uses Incorporated Software which customer have inspected or verified and which customer and TAIYO YUDEN have agreed to incorporate in this Product.

弊社では、本製品に内蔵されているファームウェア ("内蔵ファームウェア")について十分な品質評価・検証を行っておりますが、お客様におかれましても本製品の量産開始前までに、内蔵ファームウェアに瑕疵やその他品質上の不具合、お客様の製品への組み込み上の不具合がない事を十分に評価され、お客様での本製品の使用用途に合致するものであることをご確認頂けますようお願い申し上げます。弊社は、お客様において品質上の評価・検証がなされ、本製品に内蔵することについてお客様と合意したファームウェアを本製品に内蔵することと致します。

ii) Please note that TAIYO YUDEN is not responsible for any failure arising out of bugs or defects which you have not found in Incorporated Software prior to reaching an agreement of this Specification between customer and TAIYO YUDEN (including the bugs or defects found after customer's acceptance and evaluation), and that TAIYO YUDEN does not render any corrective services, including but not limited to updating or upgrading service for Incorporated Software in case such failures may occur.

納入仕様書の取り交わし前に未検証であったバグ等に起因する不具合(お客様にて評価、承認の上、量産後に発生した不具合)に関しては、弊社の保証範囲外とさせて頂きますので、何卒ご了承ください。また、これらの不具合発生時における内蔵ファームウェアの書換え又はアップグレード等につきましても弊社では対応致しかねますので、予めご了承ください。

iii) In the case that customer requests TAIYO YUIDEN to customize the hardware or software of this Product in order to meet such customer's specific needs, TAIYO YUDEN will make commercially reasonable effort to modify such hardware or software at customer's expense; provide however, the customer is kindly requested to agrees it doesn't mean that TAIYO YUDEN has obligations to do so even in the case it is technically difficult for TAIYO YUDEN.

お客様の都合により、ハードウェアおよびソフトウェアのカスタム対応が必要となった場合、弊社はお客様の依頼により、有償にて本対応を行います。但し、カスタムの内容によりましては、対応できない場合がありますので、予めご了承ください。

iv) Any failure arising out of this Product will be examined by TAIYO YUDEN regardless of before or after mass production. Customer agrees that once such failure is turned out not to be responsible for TAIYO YUDEN after aforesaid examination, some of the technical support shall be conducted by TAIYO YUDEN at customer's expense; provided however, exact cost of this technical support can be agreed through the negotiation by the parties.

お客様にて、量産適用前後を問わず、本製品に起因する問題が生じた場合、弊社は問題解決のために要因の検討を行います。この結果、問題の要因が弊社にないことが判明した後のお客様へのサポートにつきましては、一部有償とさせて戴きますので、予めご了承願います。なお、この際のサポート費用につきましては、その都度両社協議の上、定めさせて頂きます。

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d. Caution for Export Control

輸出注意事項

This Product may be subject to governmental approvals, consents, licenses, authorizations, declarations, filings, and registrations for export or re-export of the Product, required by *Japanese Foreign Exchange and Foreign Trade Law(including related laws and regulations)* and/or any other country's applicable laws or regulations related to export control.

In case you will export or re-export this Product, you are strongly recommended to check and confirm, before exporting or re-exporting, necessary procedures for export or re-export of this Product which is required by applicable laws and regulations, and if necessary, you have to obtain necessary and appropriate approvals or licenses from governmental authority at your own risk and expense.

本製品は、日本国の「外国為替及び外国貿易法」(関連法令・規則を含む)及び/又は諸外国の輸出管理関連法規に基づく輸出(再輸出を含む)申請、承認又は許可の対象となる場合があります。本製品を輸出(再輸出)する場合には、必ず事前にこれら関連法規が定める手続をご確認頂き、必要な場合には、お客様の責任と費用において、適切な承認・許可をお取りください。

e. Term of Warranty

保証期間

TAIYO YUDEN warrants only that this Product is in conformity with this Specification for one year after purchase and shall in no event give any other warranty.

弊社は納入後一年間、本製品が本仕様書を満足することを保証します。 本仕様に記載のない事項については協議の上解決するものとします。

f. Items of the Specification

仕様書の記載事項

i) Any question arising from the Specification shall be solved in good faith through mutual discussion by the parties hereof.

本仕様書に疑義の生じた場合は、打ち合わせにより解決します。

ii) The language of this "General items" is Japanese and this "General items" shall be interpreted by Japanese Any copies of translation is a reference purpose only and is not binding on both parties hereto. 本一般事項書は、日本語の記載を主文とし、日本語で解釈されるものとする。翻訳による服本はあくまで参照の目的のみであり、両当事者を法的に拘束するものではない。

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Safety Precautions

RE:The use of Embedded Software and customer support 内蔵ソフトウェアの使用とサポートについて

Before using **Bluetooth**® product.

ご使用にあたって

Please kindly read carefully and understand the following before using the Products.

本製品のご使用にあたっては、以下の事項をご理解頂き、ご了解頂いた上でご使用ください。

1. Taiyo Yuden Co., Ltd. (hereinafter "TY"), lawfully has copyrights and other rights to the software embedded to the memory of the Products (the "Embedded Software"). Except as otherwise expressly provided herein, your company is not permitted to disclose or offer the Embedded Software, either wholly or partly, to any third party (including uploading to your company or third party(ies)'s web sites and downloading by third parties from such sites), nor to copy, revise, reverse engineer, upgrade, make specification change, or alienate the Embedded Software.

太陽誘電株式会社(以下、「弊社」といいます)は、本製品に内蔵された記憶装置に書込まれたソフトウェア(以下、「内蔵ソフトウェア」といいます)に関する著作権その他の権利を適法に有しています。弊社は、内蔵ソフトウェアの全部又は一部を問わず、本製品以外での使用、第三者への開示・提供(Webサイトへの内蔵ソフトウェアの掲載やそこからの第三者によるダウンロード等を含む)及び内蔵ソフトウェアの複製・改変・バージョンアップ・仕様変更、譲渡等(解析調査; Reverse engineering 含む)を禁止させて頂きます。

2. Before using the Products, your company need to check and confirm sufficient safety and operation of your company's products which incorporate the Products and interoperability and compatibility with other *Bluetooth* enabled products. By execution or approval of this Specification, your company shall be deemed to have fully evaluated and confirmed the Products (including the Embedded Software) (the Embedded Software that your company has so fully evaluated and confirmed is hereinafter referred to as "Approved Software").

本製品を使用される際には、必ず貴社にて事前に充分な安全性・動作性、他の機器との接続性・適合性等の評価を行い、使用に際し支障が無い事をご確認下さい。本納入仕様書の取り交わしをもって、貴社にて本製品(内蔵ソフトウェア含む)を評価・確認済みであるとみなされます。(貴社にて評価・確認された内蔵ソフトウェアを以下「承認ソフトウェア」といい、その型番等を本仕様書に記載・特定します)。

3. Although TY has made full assessment of the Embedded Software, there is still possibility of malfunction of quality or performance due to the bug or other causes existing in or arising out of the Embedded Software, or due to combination with other product including your product. ("Potential Failure").

Your company shall be deemed to have agreed with the following by the execution or approval of this Specification.

弊社は内蔵ソフトウェアに関して充分な評価を実施しておりますが、内蔵ソフトウェアのBug その他内蔵ソフトウェアに内在若しくは起因する不具合又は他の機器(貴社製品含む)との組合せによる内蔵ソフトウェアの不具合により、本製品の品質・性能に異常(以下、「潜在的不具合」といいます)が発生する可能性があります。貴社は、潜在的不具合に関し本納入仕様書の取り交わしをもって次の各号に定める事項について合意したものとみなさせて頂きます。

1)The Potential Failure shall not be deemed as defect or failure of the Embedded Software or the Products, under the agreement between TY and your company (executed either in past, or in the future) or under all applicable laws.

潜在的不具合が貴社と弊社との間の契約上(過去・将来を問わない)又は法律上定められた瑕疵又は本製品として の欠陥には該当しないこと。

2)Your company shall indemnify, hold harmless and defend TY from and against any claims, lawsuits, or damages that arise or result from the Potential Failure.

潜在的不具合に起因して貴社に損害が生じた場合であっても、弊社に損害賠償請求その他いかなる請求もしないこと。

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4. TY have not evaluated and confirmed the interoperability, compatibility, etc. of the Products (including Embedded Software) with every kind of *Bluetooth*® enabled product. In addition, TY does not guarantee interoperability and compatibility of the Product with certain devices. In order to minimize the damage or harm arising out of the Potential Failure or out of combination with other devices, TY recommend your company set up interface or external pin (for detail, please refer to Specification "Pin Layout" of this document) for rewriting the Embedded Software.

弊社では、あらゆる機器に対して本製品(内蔵ソフトウェア含む)の動作確認を実施しているわけではありません。また、本仕様書は、本製品において特定の機器への接続性・適合性等を保証するものではありません。内蔵ソフトウェアの潜在的不具合及び各機器との組合せ等により問題が発生した場合にその損害を最小限に止める為にも、本製品を使用する貴社製品に、内蔵ソフトウェアを書き換える為のインターフェイスや外部端子(詳細は本書"ピンレイアウト"を参照)を設けて戴くことを推奨致します。

5. Except as mentioned in Paragraph 2 of "Support limitation when failure occurs" provided below, TY in principal will not accept your company request to update or change the specifications of the Approved Software. In case your company wishes TY to update or change the specifications of Approved Software, or your company do by yourself, please consult TY beforehand. 弊社は、下記「不具合時の対応について」の第2項各号のいずれかに該当する場合を除き、原則として貴社の都合による承認ソフトウェアのバージョンアップや仕様変更のご要望はお引き受け致し兼ねます。貴社のご都合により弊社にバージョンアップ・仕様変更を希望される場合又は貴社においてバージョンアップ・仕様変更等をされる場合は、事前に弊社へご相談ください。

Support limitation when failure occurs.

不具合時の対応について

1. Your company shall take full responsibility at your own expense and cost to resolve whatever kind/form of problem caused by the Potential Failure in the Embedded Software.

本製品に関して、承認ソフトウェアの潜在的不具合により問題が発生した場合、いかなる種類・形態の問題であれ、すべて貴社の責任と費用負担にてご対処項くものとします。

- 2.Please kindly notify TY of any Potential Failure. Upon your company's request, TY is ready to provide the following supports. 本製品に関して潜在的不具合が発見された場合には、お手数ですが弊社へご連絡戴けます様、お願い致します。ご連絡頂ければ、弊社は貴社に対して以下のサポートをご提供致します。
 - 1)During one year from the date of the execution or approval of this Specification, TY will provide, free of charge, information or revised/restored Embedded Software then available to TY for resolving problems caused by the Potential Failure.

本仕様書承認後1年間は、本製品の潜在的不具合により発生した問題を解決するために必要な既存情報の提供、改修・修復された内蔵ソフトウェアの提供を無償にて行います。

2)After one year period mentioned above, TY will provide the same supports as mentioned above with chargeto your company. However, in case TY has discontinued manufacturing the Products, TY provides such supports during six (6) months from the discontinuation regardless of whether your company pays relevant costs and expenses.

前号の期間経過後は、有償にて前号の対応を行います。但し、本製品が生産終了となった場合は、有償といえども本号のサポートは当該生産終了後6ヶ月間までとさせて頂きます。

Control No.	Control name	APPROVED	CHECKD	DRAWN	DESIGNED
	Absolute maximum ratings				
HD-AM-					
A041102	絶対最大定格書				

1. Maximum rating

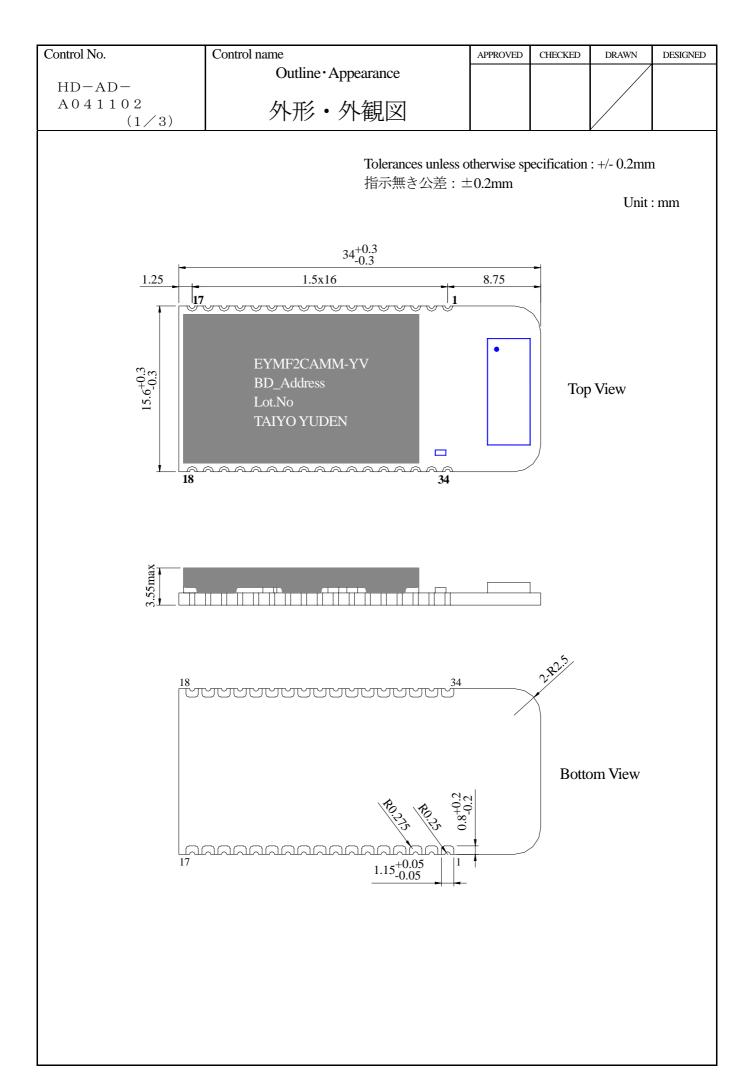
T4 area	Cb al		Rat	ting		Domonle
Item	Symbol	Min.	Тур.	Max.	Unit	Remark
Supply voltage	VDD_MEM, VDD_PIO	-0.3		3.6	V	
Supply voltage	VDD_1.8	-0.3		1.9	V	

2. Recommendation operating range

Item	Crombal	Rating				Remark
Item	Symbol	Min.	Тур.	Max.	Unit	Kemark
Supply voltage 1	VDD_MEM	3.0	3.3	3.6	V	
Supply voltage 2	VDD_PIO	3.0	3.3	3.6	V	
Supply voltage 3	VDD_1.8	1.75	1.8	1.9	V	
Supply voltage ripple and spike noise	VDD_rn			30	mVp-p	Note 1
Operation temperature range	Topr	0	25	70	Degree C	Humidity=40%RH Note 2

Notes:

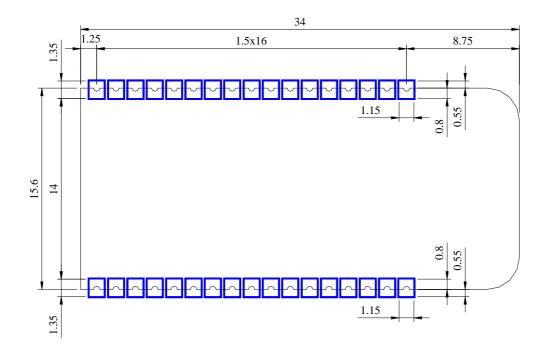
- 1. In case a regulator of Ripple extraction coefficient (more than 70dB) is added to outside of the VDD_1.8 terminal.
- 2. Operation temperature range is set to satisfy products electrical characteristics for a short period of time. Refer reliability condition to check the product life cycle if you use this module for a long period of time in the condition other than the Typ. standard.



Control No.	Control name	APPROVED	CHECKED	DRAWN	DESIGNED
	Outline · Appearance				
HD-AD-	11				
A 0 4 1 1 0 2	外形・外観図				
(2/3)	ノトハク・ノド町に凸				

LAND PATTERN EXAMPLE

Unit: mm



Control No.	Control name	APPROVED	CHECKED	DRAWN	DESIGNED
	Pin Description				
HD-BA-	for EYMF2CAMM-YV				
$A \ 0 \ 4 \ 1 \ 1 \ 0 \ 2 $ $(1/1)$	ピンレイアウト図				

Pin Descriptions

Note	: Unused pins should	not be connected.		
No.	Pin Name	I/O	Description	Block
1	GND	-	Ground	Power
2	AIO(0)	Input/Output	Not use	GPIO
3	AIO(1)	Input/Output		GPIO
4	RESET	Input	Active high RESET. With 51k ohm internal pull-down	RESET
5	SPI_MISO	Output	The pin is used for the firmware update, PS_KEY setting and Test_	SPI
6	SPI_CSB	Input	mode. It connects to PC.	SPI
7	SPI_CLK	Input		SPI
8	SPI _MOSI	Input		SPI
9	GND	-	Ground	Power
10	UART_RTS	Output	Request to send.(flow control signal from host) Tri-statable with internal pull-up	UART
11	UART_CTS	Input	Clear to send.(flow control signal to host) With weak internal pull-down	UART
12	UART_TX	Output	TX data to host.	UART
13	UART_RX	Input	RX data from host. With weak internal pull-down	UART
14	VDD_1.8	Input	DC supply 1.8V	Power
15	VDD_MEM	Input	DC supply 3.3V	Power
16	VDD_PIO	Input	DC supply 3.3V	Power
17	GND	-	Ground	Power
18	GND	-	Ground	Power
19	USB_DP	Input/Output	This signal should be connected to ground	USB
20	USB_DN	Input/Output	This signal should be connected to ground	USB
21	PIO(11)	Input/Output	Not use	GPIO
22	PIO(10)	Input	Configure Baud Rate[0]	GPIO
23	PIO(9)	Input	Configure Baud Rate[1]	GPIO
24	PIO(8)	Input	Configure Baud Rate[2]	GPIO
			Switch for Master/Slave mode	GPIO
25	PIO(7)	Input	(For Automatic Mode)	
26	PIO(6)	Input	Switch for Automatic/Command control mode	GPIO
27	GND	-	Ground	Power
28	PIO(5)	Output	Light LED[1]	GPIO
29	PIO(4)	Input	This determines if Messages are generated in Automatic Mode	GPIO
30	PIO(3)	Output	Light LED[0]	GPIO
31	PIO(2)	Input/Output	Not use	GPIO
32			Not use	GPIO
	PIO(1)	Input/Output		
33	PIO(0)	Input/Output	Not use	GPIO
34	GND	-	Ground	Power

Unused pins should not be connected.

FCC Regulatory Information

CAUTION: The device complies with FCC radiation exposure limits set forth for an uncontrolled environment. The device must not be co-located or operated in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may Cause undesired operation.

Canada Regulatory Information

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes: (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

Canadian Radio Interference Regulations: This digital apparatus does not exceed Class B limits for radio noise emissions from a digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Industry Canada.

Cet appareil numérique respecte les limites de bruits radio éléctiques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par l'Industrie Canada.