



## **Test Solutions**





### Quad Flat Packages

### (IC51)\*

Clamshell type socket

### (IC51) (IC120)

Clamshell and Open Top for PLCC (with auto eject mechanism)

### (IC200)\*

Open Top ultra low actuation force socket, also available with shoulder contact system

### (IC357) (IC500)

Open Top, 2-point contact







### Dual Side Packages

### (IC51)\*

Clamshell type socket

Open Top TSOP

### (IC191)

Open Top for SO / TSOP I

### (IC295)\*

Open top with single and 2-point contact system

### (IC37) (IC76) (IC121)

DIP / SDIP for 2.54 and 1.778mm pitch

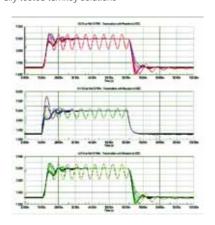
### (IC100) (IC107)

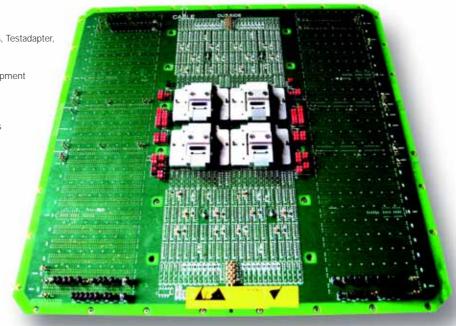
SOJ low insertion force socket for dead and live bug loading

# Another Dimension

### PCB Designs

- In-house design and development department
- Fifteen years experiences in test application development (Soft- and Hardware) of Analog- and Mixed Signal integrated circuits
- Exceptional expertise in DUT-Boards, Loadboards / Testboards, Testadapter, Burn-In Boards and Life Test Boards (HAST)
- High-end simulation tool, and state-of-the-art test and lab equipment
- Design and workflows
- Familiar with production test flow and qualification procedures
- Wide range of design variants possible
- Cutting edge design and Manufacturing tools
- Fully tested turnkey solutions













### Test Contactors Solutions

### (YED274) (YED254) (YED900)

Spring probe contactors for manual and automatic test systems pre-test and HAST applications.

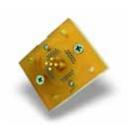
Probe pin sockets in various types and styles

Our contactors can be designed for customer specific requirements.

Socket production in milling and moulded variations

System designs incorporating sockets and boards (Load/DUT, Burn-In, HAST)





### Receptacles

Test socket extensions for various footprints and pitches



### QFN Packages

(QFN) (NP445) (NP473) (NP506)

Open Top and Clamshell Leadless Quad Flat Package 0.40 to 1.27mm pitch



### Inline Packages

### (IC176)\*

Single inline memory modules available with various pin counts

### (IC438)\*

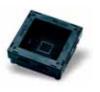
Dual inline memory modules pin counts 72 to 240 and pitches 0.5 to 1.27mm

### (IC182)\*

For Zig-Zag inline packages with 1.27, 1.5, 1.78 and 2.54mm pitch

### (IC299)

HF SMT Contactor Y-Shaped contacts







### Arrays

### (NP276) to (NP383)

Clamshell and Open Top Sockets for BGA / CSP with pitches from 0.4mm

### (NP437) (NP481) (IC511)

Clamshell and Open Top CSP 0.40mm pitch for SMT compressed mounting

### (IC398)\* (IC409)

Clamshell and Open Top CSP 0.50mm pitch for SMT compressed mounting

### (NP89) (NP236)

ZIF PGA / SPGA socket with 3 point contact system

## AdvancedMC Connectors



### AdvancedTCA - (CN074)

AdvancedTCA (Advanced Telecom Computing Architecture) is a series of specifications to support latest requirements of high end communication equipment. AdvancedTCA systems provide core applications with high reliability, availability and serviceability.

The AdvancedTCA shelf accepts up to 14 AdvancedTCA carrier boards (blades).

### AdvancedMC (Advanced Mezzanine Card)

Are the primary components of AdvancedTCA and MicroTCA systems. They provide the system with their functional elements. One AdvancedTCA blade can accept up to 8 AdvancedMC's

### AdvancedMC connectors for AdvancedTCA (Type B , B+, AB, A+B+)

CN074 supports data transfer between AdvancedMC and AdvancedTCA

Carrier Board (blade) at 12.5Gbps and beyond, optimizing the performance
of the AdvancedTCA system. CN074 not only covers the full range of standard

AdvancedMCs but also allows special pin configuration

to meet your specific needs. A new mid-size A+B+ type is specially for use in1U blades.



AdvancedCMT is the quality trademark of Yamaichi Electronics for connectors used in Advanced TCA® and MicroTCA®

**EMT** Speed

**EMT** Flexibility

**∠**MT Reliability



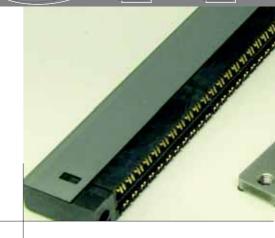


### MicroTCA - (CN080)

### AdvancedMC connectors for MicroTCA

CN080 carries data signals at 12.5Gbps and beyond between AdvancedMC and MicroTCA backplane.

CN080 is essential to bring the high-performance and reliability of AdvancedTCA to the MicroTCA systems.



### MicroTCA - Micro Telecom Computing Architechture

MicroTCA is a series of specifications developed by PICMG to incorporate the key elements of AdvancedTCA for physically smaller edge applications that AdvancedTCA may not apply e.g. next generation equipment for industrial, medical, MIL/areospace applications



### MCH Plug - (CN084)

### MicroTCA Carrier Hub Connectors

Different standard variations from single tounge up to four tounge are ready and available.

The modular design concept enables many custom variations.

### MCH - MicroTCA Carrier Hub

For the management of the MicroTCA system the MicroTCA carrier hub (MCH) is used

The further Yamaichi product line for ATCA and MicroTCA also includes specific RJ45 and Power Connectors

# **High Speed Connectors**

### Non-ZIF High Speed Connector System

Connectors and matching cables for low voltage

Differential signal transmission (LVDS) up to 5 Gbps

Patented push insertion with automatic locking mechanism

Horizontal and vertical contact types



### **High Speed Board Connectors**

### (HF507S)

- Data rates 5 Gbps possible
- 0.5mm pitch
- Various pin counts 21, 31, 41, 51
- 90° and 180°, shielded and unshielded versions

### **Applications**

LVDS Transmission

Car Navigation Systems

Automised Test Equipment

Medical Imaging

Industrial Process Control

Network Systems

High-end Workstaions

Digital TV, Studio Cameras

High Speed PC's and Set Top Boxes



### YFB Series Cable Features

- Flexible Printed Circuit YFLEX®
- High speed transmission 10Gbps
- Differential impedance  $100\Omega$
- Customized special for you application
- LCP based printed circuit cable
- Micro-strip line structure





### YFT Series High Speed FFC Features

- High speed transmission 3Gbps
- Differential impedance  $100\Omega$
- Long flexible cable length



### HF507P Adapter for Discrete Wire Features

- Shielded and unshielded version
- Highest flexibility: only adapter or the complete cable assembly can be ordered

# Y-Con® Series

### IP67/68/69K Protected Components













The Y-ConRJ45 system offers a connector solution for harsh environments and is available in IP20 and IP67/68/69K plastic and metal versions.

The unique addition of 2 power contacts has been integrated alongside the data contacts into both Y-Con plugs and jacks whilst still maintaining the RJ45 size standards, thus making this product fully backwards compatible.



# Another Dimension





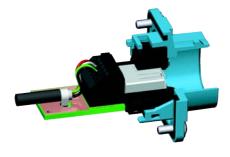
Y-ConUSB and Y-ConIEEE build on the modular system concept of this series and offer a protected plug-and-play interface for harsh environments.

Using the tried and tested cover and flange from the RJ45 variant, these products offer IP67/68/69K protected high speed data transmission for industrial applications, be it for service functions or as a primary link.

The USB plugs and jacks are all to Hi-Speed standard, transmitting data at up to 480 Mbit/s and the IEEE components allow data rates up to 800 Mbit/s.











# Cables and Assemblies / Y-Sol® Series



Approved flat and round cables are available in a large variety for all of Yamaichi's interface and internal connectors. We offer you a complete service for cables and cable assemblies so as to meet customers specific requirements.

Our 100% electrically and mechanically tested cable assemblies enable you to reduce your internal costs of assembly, test, storing and incoming inspection.

## Y-Sol® Series

### Cable Connectors Y-SOL3 and Y-SOL4

are ready-made solar cable assemblies,



They are designed according to the latest TÜV (VDE126-3) and UL requirements. The standard cables used are electron beam cross-linked Betaflam cables from Studer. For long life and highest possible weather resistance.



Ø 3mm contacts for the transmission of power up to 30A without locking



Ø 4mm contacts for the transmission of power up to 30A with locking

### Universal J-Box for Silicon Wafer Modules

The Y-Sol® Universal J-Box is a junction box featuring SMD diode technology. It is designed according to the latest TÜV (VDE126-5) and UL requirements. The J-Box can be connected to the panel either by spring force or soldering. The J-Box design allows automated assembly in an assembly line. Up to 6 bypass SMD diodes can be integrated as per customer

requirements (protection against overheating through shadowing)

Patent Pending\*) on contact design.



The Y-Sol® Thin Film J-Box is a junction box for the automatic assembly on Thin Film wafer modules. It is designed according to the latest TÜV (VDE126-5) and UL requirements.

The contacting is realised through spring loaded contacts when putting on the lid. One bypass SMD diode can be integrated optionally as per customer requirement (protection against overheating through shadowing) Patent Pending\*) on contact design

## Internal Connectors



### Internal Connectors

Yamaichi offers a wide range of internal connectors for

Board-to-Board and Board-to-Cable connection.

This includes also different types of pitches as well as vertical and horizontal connectors

## ZIF Connectors -(FPC-96212) (FPC-98210)

- 90° and 180° versions
- 0.5 and 1.0mm pitches
- Top and bottom contacts
- "Drawer" for FPC locking
- Matching FFC cable



### Y-Lock with Pullforce Locking (Y-LPF-C1) (Y-LPF-C5)

- New design for an easy, quick and secure assembly for a Board-to-Board solution
- "One-push lock" system
- Locking mechanism by use of small hooks at the board connector
- Use of standard FFC/FPC with supporting tape
- Reliable contact design
- Very compact size
- Horizontal and vertical types with 0.5 and 1.0mm pitches
- Optional use of an additional stiffener to avoid wrong mating and for high contact security.

# Another Dimension



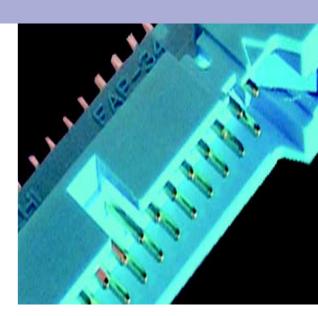
### (RDP / RDS)\*

0.5mm pitch B-t-B connectors



### (NFS / NFP / NDS / NDP / NS\* / NP\*)

1.27 mm pitch, B-to-C and B-to-B connector series, low profile and IDC for 25 MIL flat ribbon cable



### (ZS / ZP)\*

2.00mm pitch connector series for B-to-B and B-to-C, IDC for 1.00mm flat ribbon cable



### Powerline Connectors

## BoardFit3.0 / BoardFit4.2 (P3 / P4)\*

Pitches of 3.0mm and 4.2mm B-t-B and B-t-C connectors in SMT, TH and crimp type connection. for high current applications up to 5A (P3) and 9A (P4)



### (FAS / FAP / FCP / FGP / FS\* / FP\* / UFS)

DIN41651 2.54mm pitch MIL type connector series, IDC for 50MIL flat ribbon cable



### MatchCon (M)\*

B-t-B and B-t-C solutions 1.27mm pitch with high contact forces. No fretting and movements will be absorbed

## I/O Connectors



### (USB)\*

USB: A & B type connector series

Mini USB: 4, 5, and 8 pin connector series Acc. to USB 1.1 and 2.0 standards

(GBS / GBP)\*

IEEE1394 connectors



### (MDIN)\*

MiniDIN circular connectors and receptacles for PCB and panel mount in various designs



### (SAS)\*

SAS Receptacles according to SAS standards



### (LJE / AJ / TS)\*

Earphone and Modular Jacks in various designs in THT and SMT



## (HDMI)\* (DVI)\* HDMI connectors

DVI -I and DVI- D plugs and

Receptacles.

DVI / VGA adapter



### SCSI Connectors

### (NHS / NHP / NHA / RCS / RCP)

1.27mm pitch interface connectors and covers in various designs according to SCSI-2 / -3 and -4 standards



### D-Sub (HD and Standard) (CT / DR / DS / DD)\*

Standard and High Density D-Sub connector series and covers



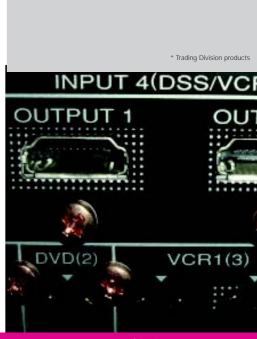
### MiniDeltaRibbon

(NCS / NCP / NHA)

1.27mm pitch Mini Delta Ribbon interface connectors and covers in various designs



Battery and 2-Way Miniature Connectors (CN032) (CN036S)



## **Card Connectors**



### microSD - (PJS008)

microSD Card Reader top mount and reversed type with push / push eject mechanism also microSD-to-miniSD adapter



### SD / MMC - (FPS009)

Secure Digital and MultiMediaCard connectors manual and push / push eject types. Low profile versions, top mount and reversed types



### miniSD - (NMS011)

miniSD Card Reader with push / push eject mechanism Top mount and reversed types as well as miniSD-to-SD adapter



### Card Connectors

Yamaichi offers a wide product range of Card Readers for all main Flash Memory card types as well as for SIM cards and PCMCIA applications. This high variety from Yamaichi Electronics ia able to fulfill the customers requirements in individual applications. Different technologies like the innovative Two-point contact system also offer many advantages



### SIM - 8 Pin (FMS008)

Manual and push/push types with different heights and ultra low profiles also the possibility of a SIM with separate switch



### Combination Connectors - (JCS) (FRS)

2-in-1 for MS / Memory stick

2-in-1 for microSD / SIM 4-in-1 for MS / SD / MMC / xD cards 5-in-1 for MS / SD / MMC / SM / xD cards



### SIM - 6 Pin (FMS006)

Push / push, push / lock and push-cover connectors with and without switch also reverse tray type



### PCMCIA (CNS / CNT)\*

PCMCIA II slot connectors in SMT or TH Single and double deck versions



## SmartMedia - (CN015)

Card connector system for SSFDC - SmartMedia Card,



### Compact Flash - (CF)\*

Compact Flash, SMT connectors standard and slim types I & II with or without ejector



### MMCmicro - (PGS010)

MMCmicro top mount with push / push ejector,

## **Production Sockets**

## **Packages**

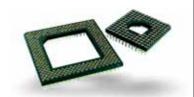


SOP (IC179)

Low profile SMT socket with 28 to 44 pins for SOP

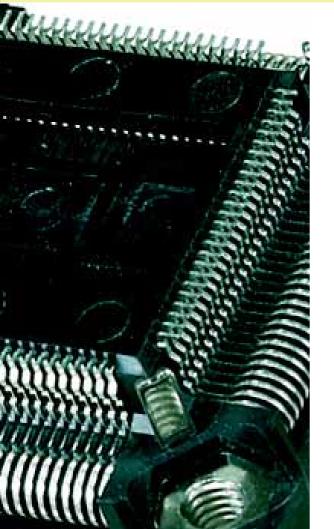
Yamaichi production and pre-series trial sockets are for a variety of semiconductor packages, from various manufactures, and offer extended or manual handling, depending on the series.

### Arrays



(YED122 / YED210)

Very low insertion force socket for PGA / SPGA with 6 finger contact

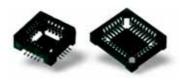




QFP

QFP (IC149 / ICP)

QFP, sockets (SMT) with almost identical PCB layout and emulation adapter



PLCC (IC160)

Low profile PLCC, SMT production sockets for automatic handling