# CompactCom™

The Anybus®-CompactCom™ family provides instant connectivity to leading fieldbus, industrial Ethernet protocols, serial, USB and wireless networks with just one fast, one-time development.

The small but powerful CompactCom modules are the perfect fit for device manufacturers requiring single or multi-network slave communication capability. The combination of flexibility and versatility makes CompactCom the most compelling alternative to extensive in-house development.


**Used with automation devices such as:**

- HMIs
- Drives
- Weigh scales
- I/O blocks
- Temperature controllers
- Valve manifolds
- Robot controllers
- Micro PLCs
- Bar-code scanners
- Welding controllers
- RFID applications

## Availability

**Networks:**

BACnet/IP
BACnet MS/TP
Bluetooth
CANopen
CC-Link
CompoNet
ControlNet
DeviceNet
EtherCAT
EtherNet/IP
EtherNet/IP 2-port
Modbus RTU
Modbus TCP
Modbus TCP 2-port
Powerlink
Profibus DPV0
Profibus DPV1
Profinet IO
Profinet IO 2-port *
RS-232
RS-485/422
Sercos III
USB

All CompactCom versions are available with or without housing.

(*Energy profile available)

## High performance and functionality

Anybus CompactCom contains the complete functionality required for an industrial network interface. They provide a standardized and network independent parallel or serial application interface for the host automation device.

The parallel interface communicates via a shared DPRAM memory. This allows for a very efficient data exchange, and generally produces very little overhead for the host application. As an alternative, CompactCom can communicate via an asynchronous serial interface which operates at baud rates from 19.2kbps - 625kbps.

## Flexible software API

CompactCom's software interface is designed to be network protocol independent, allowing the host application to support over 20 industrial networks using the same "Anybus" software driver, without loss of functionality. CompactCom's unique generic software interface knits together I/O, parameters, and diagnostics functionality. This creates total transparency when it comes to the data exchange between the network and the device.

## Powered by Anybus NP30

CompactCom is built on the Anybus NP30, a state-of-the-art network processor. It offloads your own microprocessor from all communication tasks. NP30 incorporates original technology from the network founders which guarantees reliability, performance and network conformance.

## Innovative mounting and fastening

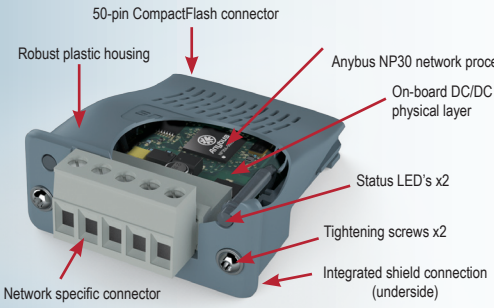
A pre-designated slot on the host PCB with an integrated CompactFlash™ connector, which is specifically tailored for the CompactCom module is all you need. Shielding and grounding is also achieved on module mounting. Securing the CompactCom is made via a patented fastening mechanism. This innovative method ensures a high EMC compliance level.

## Features and benefits

- Cost optimized communication modules for industrial automation devices
- Provides instant connectivity to all major industrial networks with only one development
- Full interchangeability between networks without any changes to your device
- All new and future network updates and enhancements maintained by HMS
- Incorporates original technology from the network founders that ensures reliability
- Short in-design with free assistance from HMS ensures a fast time to market
- Pre-certified for full interoperability and network compliance
- 3.3 volt design with low power consumption with a high data throughput
- Ethernet versions available with an integrated 2-port switch allowing network daisy-chaining
- Drive Profile versions available

## TECHNICAL SPECIFICATIONS

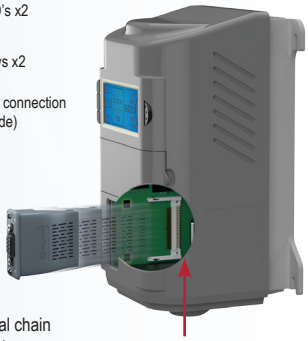
| Technical Details | |
|---|---|
| Dimensions (L • W • H) | 52•50•22 mm, 2.04•1.97•0.86“<br>51•37•16 mm, 2.01•4.46•0.63“ (modules without housing) |
| Protection class | IP20 |
| RoHS Compliance | Yes |
| Galvanically isolated network interface | Yes |
| Application interfaces | Parallel Dual Port Ram (DPRAM): 8 bit data bus, 14 bit address bus<br>Asynchronous serial interface with Baudrate between 19.2 kbps - 625 kbps |
| Module types | Active modules: Includes parallel and serial application interfaces and full industrial network functionality<br>Passive modules: Physical layer interface only providing transparent pass-through for serial data |
| Application drivers | “Standard” and “Lite” drivers available depending on host application requirements |
| Drive Profile support | Profibus, DeviceNet, CANopen, CC-Link and EtherNet/IP |
| Ethernet features | 1 and 2-port versions, transparent socket interface, integrated 2-port switch, IT functions (FTP server, E-mail, Web server with SSI support) |
| Network status led outputs | Integrated on front with housing, via application interface without housing |
| **Certifications** | |
| UL, cUL | File number: E214107 |
| Network conformance | Yes: Pre-certified for full fieldbus and Industrial Ethernet network conformance |
| **CE - Declaration of Pre-Conformity** | |
| Emission EN 61000-6-4 | EN55011 Radiated emission, EN55011 Conducted emission |
| Immunity EN 61000-6-2 | EN61000-4-2 Electrostatic discharge, EN61000-4-3 Radiated immunity, EN61000-4-4 Fast transients/burst, EN61000-4-5 Surge immunity, EN61000-4-6 Conducted immunity |
| **Electrical Characteristics** | |
| Power requirements | 3.3 VDC, +/- 0.15 VDC |
| Current comsumption | Less than <250 mA, (2-port 2xRJ45) <500 mA, ControlNet <1 000 mA |
| **Environmental Characteristics** | |
| Operating temp | -40 to 70 °C, -40-158 °F<br>-40 to 85 °C, -40-176 °F (modules without housing)<br>-40 to 85 °C, -40-176 °F (max storage temperature) |
| Humidity | 5-95 % non-condensing |
| **Starter kit** | |
| Serial carrier board including two modules, driver and resource CD | |




### Module mounting

The CompactCom module slides into a pre-designated slot in the host automation device PCB. The module is secured with an innovative mechanism by tightening the two screws located on the front cover of the CompactCom module.

The module insertion can be made at any stage in the logistical chain between the automation device manufacturer and the end customer. CompactCom slot cover available on request from HMS.



Anybus slot and 50-pin CompactFlash connector on the PCB of the host device

## NETWORK SPECIFIC FEATURES

**1** = Network connector, **2** = Baud rate,
**3** = I/O data, **4** = Other

| ACTIVE MODULES | |
|---|---|
| **BACnet/IP** | **1** = 2•RJ45 **2** = 10/100 Mbit/s full/half duplex **3** = Change of Value Notifications, Alarm Event **4** = Data sharing, Linear network topology. |
| **BACnet MS/TP** | **1** = 5.08 plug **2** = 9.6, 19.2, 38.4 or 76.8 kbit/s **3** = Change of Value Notifications, Alarm Event **4** = Data sharing. Linear network topology supported. |
| **CANopen** | **1** = DB9M **2** = Up to 1 Mbit/s **3** = 256 byte IN/OUT<br>**4** = Up to 32 PDOs in each direction. |
| **CC-Link** | **1** = 5.08 plug **2** = Up to 10 Mbit/s **3** = 126 IO points, 16 word, CC-link v.1 896 IO points, 128 word, CC-link v.2 (total maximum of 256 bytes)<br>**4** = CC-link Remote Device. Support of Automatic CC-Link System Area handshaking. |
| **CompoNet** | **1** = 2.54 plug **2** = Up to 4 Mbit/s, auto baud rate **3** = 32 byte IN/OUT<br>**4** = Redundancy available. Galvanic isolated bus electronics. CIP forwarding support. |
| **ControlNet** | **1** = BNC **2** = Fixed **3** = 256 byte IN/OUT **4** = Redundancy available. Galvanic isolated bus electronics. CIP forwarding support. |
| **DeviceNet** | **1** = 5.08 plug **2** = 125-500 kbit/s **3** = 256 byte IN/OUT<br>**4** = Automatic Baud rate support. UCMM Capable. CIP forwarding support. |
| **EtherCAT** | **1** = 2•RJ45 **2** = 100 Mbit/s full duplex **3** = 256 byte IN/OUT **4** = PDO and SDO support, DS301 compliant, EMCY support. (No IT functions or Transparent socket int.) |
| **EtherNet/IP** | **1** = RJ45 **2** = 10/100 Mbit/s full/half duplex **3** = 256 IN/OUT<br>**4** = CIP forwarding support, 2-port switch supporting announced based DLR. Support of Beacon based DLR release Q2 2012. |
| **Modbus RTU** | **1** = DB9F **2** = Up to 115.2 kbit/s **3** = 256 byte IN/OUT<br>**4** = RTU (8 bit) and ASCII (7 bit) support. Modbus message forwarding. |
| **Modbus TCP** | **1** = RJ45 **2** = 10/100 Mbit/s full/half duplex **3** = 256 byte IN/OUT<br>**4** = Modbus message forwarding, 2-port switch version available. |
| **Powerlink** | Under development, contact HMS for more information. |
| **Profibus DPV1** | **1** = DB9F **2** = Up to 12 Mbit/s **3** = 244 byte IN/OUT (368 byte total IN+OUT)<br>**4** = Generic and Profibus-specific diagnostic support. Set Slave Address support. Also available as DPV0 version. |
| **Profinet IO** | **1** = RJ45 **2** = 100 Mbit/s full duplex **3** = 256 byte IN/OUT<br>**4** = Conformance class A. 2-port switch version available supporting Conformance class B and ProfiEnergy Profile. |
| **Sercos III** | **1** = 2•RJ45 **2** = 100 Mbit/s full duplex **3** = 256 byte IN/OUT<br>**4** = Supports GDP Basic, SCP_FixCFG and SCP_NRT |
| **PASSIVE MODULES** | |
| **Bluetooth** | **1** = Internal antenna **2** = Up to 625 kbit/s **3** = Physical layer converter<br>**4** = Generic Bluetooth serial port according to the Serial Port Profile (SPP) |
| **RS-232** | **1** = DB9M **2** = Up to 250 kbit/s **3** = Physical layer converter<br>**4** = No configuration is necessary since the module only acts on the physical layer. |
| **RS-485/422** | **1** = DB9F **2** = Up to 10 kbit/s **3** = Physical layer converter<br>**4** = No configuration is necessary since the module only acts on the physical layer. |
| **USB** | **1** = USB type B **2** = 12 Mbit/s **3** = Physical layer converter<br>**4** = USB 1.1 and USB 2.0 compatible. Virtual COM port. |

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