

# ITAM Modules

## ITAM-SR01

### 8-Port RS-232/422/485 Serial Port Module



The ITAM-SR01 serial module is compatible with ITA-22 series systems and supports flexible configuration.

#### Features

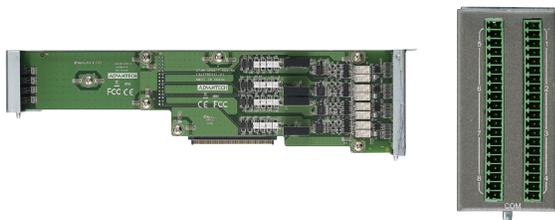
- 8 x RS-232/422/485 software-selectable serial ports
- Up to 921.6 kbps transmission speed
- 256-byte FIFOs and automatic flow control
- 2500 V<sub>DC</sub> isolation protection
- Compliant with EN50121-4 standards for railway applications

#### Specifications

General	Bus Interface	PCI Express x1 link, Gen1 compliant
	Connectors	2 x 20-pin 3.5-mm terminal block
	Ports	8
	Power Consumption	3.3V @ 1.9A (typical)
Communications	Serial Port Controller	XR17V358
	Data Bits	5,6,7,8
	Data Signals	RS232: RxD, TxD, RTS, CTS, GND RS422: Tx+, Tx-, Rx+, Rx-, GND RS485: Data+, Data-, GND
	FIFO	256 bytes
	Flow Control	RTS
	Parity	None, even, odd
	Speed	Up to 921.6 Kbps
	Stop Bits	1,1.5,2
Protection	ESD	Air ±15KV, contact ± 8KV
	Surge	L-L 1k, L-G 2K.
	Isolation	2,500 V <sub>DC</sub>
Mechanical and Environmental	Operating Temperature	-25 ~ 60 °C
	Storage Temperature	-40 ~ 85 °C
	Dimensions (L x W x D)	301.9 x 40 x 80 mm

#### Ordering Information

Part Number	Description
ITAM-SR01-00A1E	8-port RS-232/422/485 ITAM module with 2.5KV isolation
ITAM-SR01-10A1E	8-port RS-232/422/485 ITAM module
1700023421-01	20-pin 3.5/D-sub 9-pin*4 10-cm cable (optional)



## ITAM-NC01-C

### 8-Port RJ45 GbE Module



The ITAM-NC01-C copper GbE module is compatible with ITA-22 series systems and supports flexible configuration.

#### Features

- 8 x 10/100/1000 Mbps RJ45 ports
- Embedded Intel® I210-IT GbE controller
- 1500 V<sub>DC</sub> isolation protection
- Compliant with EN50121-4 standards for railway applications

#### Specifications

General	Bus Interface	PCI Express x1 link, Gen2 compliant
	Connectors	RJ45
	Ports	8
	Power Consumption	3.3V @ 2.1A, 5V @ 850mA (typical)
Communications	Ethernet Controller	8 x Intel® I210-IT
	Speed	10/100/1000 Mbps
Protection	ESD	Air ± 15KV, contact ± 8KV
	Surge	L-L ± 2KV, L-G ± 4KV
	Isolation	1,500 V <sub>DC</sub>
Mechanical and Environmental	Operating Temperature	-25 ~ 60 °C
	Storage Temperature	-40 ~ 85 °C
	Dimensions (L x W x D)	301.9 x 40 x 80 mm

#### Ordering Information

Part Number	Description
ITAM-NC01-C0A1E	8-port GbE ITAM module with RJ45 connector



## ITAM-NC02-C

### 4-Port RJ45 GbE Module



The ITAM-NC02-C copper GbE module is compatible with ITA-22 series systems and supports flexible configuration.

#### Features

- 4 x 10/100/1000 Mbps RJ45 ports
- Embedded Intel® I210-IT GbE controller
- 1500 V<sub>DC</sub> isolation protection
- Compliant with EN50121-4 standards for railway applications

#### Specifications

General	Bus Interface	PCI Express x1 link, Gen2 compliant
	Connectors	4 x RJ45
	Ports	4
Communications	Power Consumption	3.3V @ 1A, 5V @ 700mA (typical)
	Ethernet Controller	4 x Intel® I210-IT
Protection	Speed	10/100/1000 Mbps
	ESD	Air ± 15KV, contact ± 8KV
	Surge	L-L ± 2KV, L-G ± 4KV
Mechanical and Environmental	Isolation	1,500 V <sub>DC</sub>
	Operating Temperature	-25 ~ 60 °C
	Storage Temperature	-40 ~ 85 °C
	Dimensions (L x W x D)	301.9 x 40 x 80 mm

#### Ordering Information

Part Number	Description
ITAM-NC02-C0A1E	4-port GbE ITAM module with RJ45 connector



## ITAM-NC02-F

### 4-Port SFP Module



The ITAM-NC02-F Fiber SFP module is compatible with ITA-22 series systems and supports flexible configuration.

#### Features

- 4 x SFP ports with data rates of up to 1.25G/s
- Embedded Intel® I210-IS GbE controller
- SFP sockets for easy flexible Fiber expansion
- Compliant with EN50121-4 standards for railway applications

#### Specifications

General	Bus Interface	PCI Express x1 link, Gen2 compliant
	Connectors	4 x SFP
	Ports	4
Communications	Power Consumption	3.3V @ 800mA, 5V @ 750mA (typical)
	Ethernet Controller	4 x Intel® I210-IS
Mechanical and Environmental	Speed	100/1000 MB (depending on connective device)
	Operating Temperature	-25 ~ 60 °C
Mechanical and Environmental	Storage Temperature	-40 ~ 85 °C
	Dimensions (L x W x D)	301.9 x 40 x 80 mm

#### Ordering Information

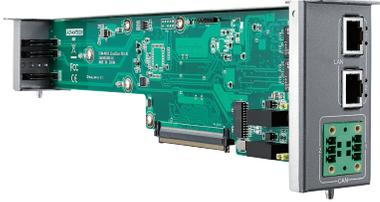
Part Number	Description
ITAM-NC02-F0A1E	4-port GbE ITAM module with SFP connector



# ITAM Modules

## ITAM-NC03

### 4-Port, Dual GbE, Dual CAN Module



The ITAM-NC03 copper GbE and CAN module is compatible with ITA-22 series systems and supports flexible configuration.

#### Features

- 2 x 10/100/1000 Mbps RJ45 ports
- 2 x 1 Mbps CAN ports
- Embedded Intel® I210-IT GbE controller
- Embedded SJ1000T/SN65HVD251DR controller
- 1500 V<sub>DC</sub> isolation protection
- Compliant with EN50121-4 standards for railway applications

#### Specifications

General	Bus Interface	PCI Express x1 link, Gen2 compliant
	Connectors	2 x RJ45, 2 x CAN
	Ports	4
	Power Consumption	3.3V @ 1A, 5V @ 700mA, 1V @ 610mA (typical)
Communications	Ethernet Controller	2 x Intel® I210-IT
	Ethernet Speed	10/100/1000 Mbps
	CAN Controller	2 x SJA1000T/SN65HVD251DR
	CAN Speed	1 Mbps
Protection	ESD	Air ± 15KV, contact ± 8KV
	Surge	L-L ±2KV, L-G ±4KV
	Isolation	1,500 V <sub>DC</sub>
Mechanical and Environmental	Operating Temperature	-25 ~ 60 °C
	Storage Temperature	-40 ~ 85 °C
	Dimensions	301.9 x 40 x 80 mm
	(L x W x D)	

#### Ordering Information

Part Number	Description
ITAM-NC03-10A1E	4-port ITAM module with dual RJ45 and dual CAN connector

