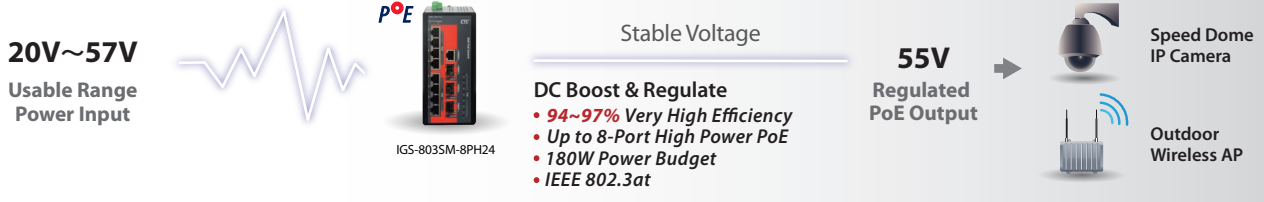


Industrial Ethernet

CTC Union offers a variety of industrial Ethernet solutions, including FE and GbE switches, copper to fiber converters and serial interface to fiber converters as well as power over Ethernet related products. These products are designed for demanding applications, such as video and process monitoring, ITS, IP surveillance and railway networks.

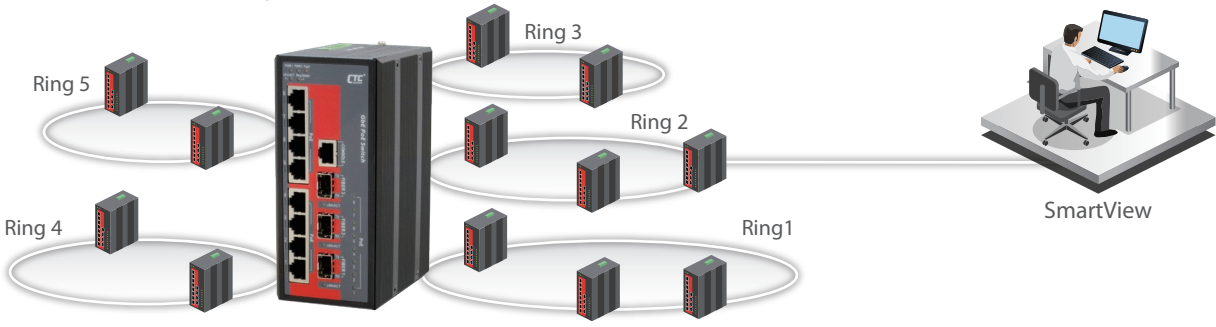


PoE Core Technology



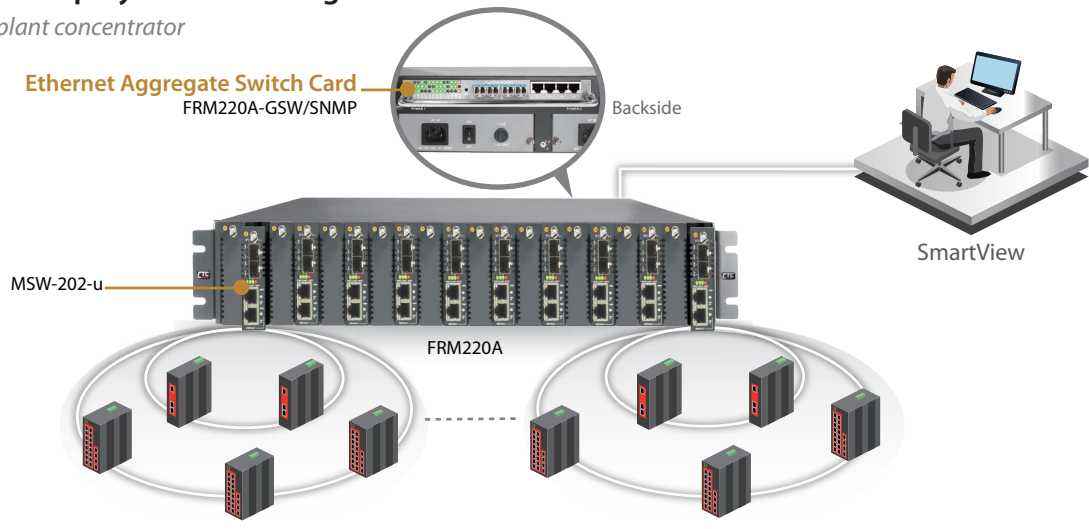
Multiple u-Ring

- Providing maximum 5 instances that each supports u-Ring, u-Chain or Sub-Ring type for flexible uses
- u-Ring, u-Chain and Sub-Ring support flexible, redundant network expansions
- <10ms recovery time
- 250 nodes expansion per ring



Central side deployment of u-Ring

- Centralized in-plant concentrator



Industrial Ethernet Switches

Model Name	UTP		Fiber Port			PoE Port IEEE802.3at	MGT	Certification			
	10/100-T(X)	10/100/1000-T(X)	100-FX	1000-X	100/1000-X			Rail Way EN50121-4	UL60950-1	EN61000-6-2 EN61000-6-4	CE/FCC
IFS-500	5							✓		✓	✓
IFS-800	8							✓		✓	✓
IFS-401F	4		1 SC/ST					✓		✓	✓
IFS-402F	4		2 SC/ST					✓		✓	✓
IFS-402GSM	4				2 SFP		✓	✓	✓	✓	✓
IGS-500		5						✓		✓	✓
IGS-800		8						✓		✓	✓
IGS-401F		4		1 SC				✓	✓	✓	✓
IGS-402F		4		2 SC				✓	✓	✓	✓
IGS-402S		4			2 SFP			✓	✓	✓	✓
IGS-404SM		4			4 SFP		✓	✓	✓	✓	✓
IFS-803GSM	8				3 SFP		✓	✓	✓	✓	✓
IGS-803SM		8			3 SFP		✓	✓	✓	✓	✓
IGS-812SM		8			12 SFP		✓	✓	Plan	✓	✓
IFS-1604GSM	16				4 SFP		✓	✓	Plan	✓	✓
IGS-1604SM		16			4 SFP		✓	✓	Plan	✓	✓
IGS-600-4PH24		6				4		✓	✓	✓	✓
IGS-401F-4PH24		4		1 SC		4		✓	✓	✓	✓
IGS-402F-4PH24		4		2 SC		4		✓	✓	✓	✓
IGS-402S-4PH24		4			2 SFP	4		✓	✓	✓	✓
IGS-402SM-4PH24		4			2 SFP	4	✓	✓	✓	✓	✓
IFS-402GSM-4PH24	4				2 SFP	4	✓	✓	✓	✓	✓
IFS-803GSM-8PH24	8				3 SFP	8	✓	✓	✓	✓	✓
IGS-803SM-8PH24		8			3 SFP	8	✓	✓	✓	✓	✓

Industrial Ethernet Switches (Power Substation)

Model Name	UTP		Fiber Port	Power		MGT	Certification		
	10/100-T(X)	10/100/1000-T(X)	100/1000-X	isolated DC-±24/48	DC88-300V, AC85-264V		IEC-61850-3	UL60950-1	CE/FCC
IPS-G803SM-DD		8	3 SFP	2		✓	✓	Plan	✓
IPS-G803SM-AD		8	3 SFP	2	1	✓	✓	Plan	✓
IPS-803GSM-DD	8		3 SFP	2		✓	✓	Plan	✓
IPS-803GSM-AD	8		3 SFP	2	1	✓	✓	Plan	✓

Industrial Ethernet Switches (Vehicle)

Model Name	UTP Port M12		Fiber	PoE Port	MGT	IP67	Certification				Shock Vibration
	10/100-T(X)	10/100/1000-T(X)	100/1000	IEEE802.3at			EN50121-4	UL60950-1	EN50155	CE/FCC	IEC61373
ITP-500-67	5					✓	✓	Plan	✓	✓	✓
ITP-800-67	8					✓	✓	Plan	✓	✓	✓
ITP-802GTM-8PH24-67	8	2		8	✓	✓	✓	Plan	✓	✓	✓
ITP-802GSM-8PH24-67	8		2	8	✓	✓	✓	Plan	✓	✓	✓
ITP-800M-8PH24-67	8			8	✓	✓	✓	Plan	✓	✓	✓
ITP-G802SM-8PH24-67		8	2	8	✓	✓	✓	Plan	✓	✓	✓
ITP-G800M-8PH24-67		8		8	✓	✓	✓	Plan	✓	✓	✓
ITP-802GTM-67	8	2			✓	✓	✓	Plan	✓	✓	✓
ITP-802GSM-67	8		2		✓	✓	✓	Plan	✓	✓	✓
ITP-800M-67	8				✓	✓	✓	Plan	✓	✓	✓
ITP-G802SM-67		8	2		✓	✓	✓	Plan	✓	✓	✓
ITP-G800M-67		8			✓	✓	✓	Plan	✓	✓	✓

Industrial Ethernet Converters

Model Name	UTP		Fiber Port			PoE Port PD/PSE	MGT	Certification			
	10/100-T(X)	10/100/1000-T(X)	100-FX	100/1000-X	Dual Speed 100/1000-X			Rail Way EN50121-4	UL60950-1	EN61000-6-2 EN61000-6-4	CE/FCC
IMC-100	1		SC/ST					✓	✓	✓	✓
IMC-100-PD	1		SC/ST			PD		✓	✓	✓	✓
IMC-100M	1		SC/ST				✓	✓	✓	✓	✓
IMC-1000		1		SC				✓	✓	✓	✓
IMC-1000S		1		SFP				✓	✓	✓	✓
IMC-1000M		1		SC			✓	✓	✓	✓	✓
IMC-1000MS		1		SFP			✓	✓	✓	✓	✓
IMC-100-PH12	1	1	SC/ST			PSE		✓	✓	✓	✓
IMC-100M-PH12	1		SC/ST			PSE	✓	✓	Plan	✓	✓
IMC-1000-PH12		1			SC	PSE		✓	Plan	✓	✓
IMC-1000S-PH12		1			SFP	PSE		✓	Plan	✓	✓
IMC-1000M-PH12		1			SC	PSE	✓	✓	Plan	✓	✓
IMC-1000MS-PH12		1			SFP	PSE	✓	✓	Plan	✓	✓

Serial Fiber Converters

Model Name	Dual	Serial		Fiber		Certification		
	Channel	RS232	RS422/485	SC/ST	Daisy Chain	U60950-1	EN61000-6-2 EN61000-6-4	CE/FCC
IFC-FDC	✓	2	1	2	✓	✓	✓	✓
IFC-Serial	✓	2	1	1		✓	✓	✓

PoE Injector

Model Name	LAN UTP Port	PoE UTP Port		Certification		
	10/100/1000Base-T(X)	10/100/1000Base-T(X)	PoE 15.4W/ 30W/36W/60W	EN61000-6-2, EN61000-6-4	EN50121-4	CE/FCC
INJ-IG60-PH24	✓	✓	✓	✓	✓	✓

IP Device Servers

Model Name	LAN UTP Port	WAN Port		Certification
	10/100Base-TX	RS-232	RS-485	CE/FCC
STE100A/RS-232	✓	✓		✓
STE100A-RS-485	✓		✓	✓