

UCOS® System Redundancy Fast Facts

Standard Redundancy

UCOS Redundancy

The UCOS Field Control Unit (FCU) reads IO values from field devices, communicates with the engineering workstation, and solves control logic. UCOS FCUs feature integrated redundancy capabilities. If multiple FCUs are used in a project, primary and backup roles are assigned to each. If communication to the primary FCU is not detected, a backup FCU is automatically promoted to primary status.

Failover scenarios can be managed to ensure that a preferred logic engine and gateway server combination will result. This is especially useful when devices are located on different local area networks (LANs) or wide area networks (WANs.)

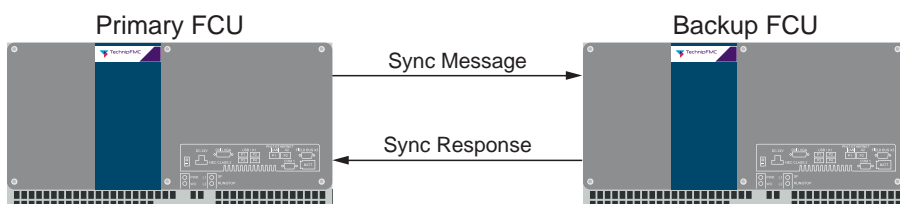
The following are explanations of standard, gateway, and multi-gateway redundancy.

Standard Redundancy

Standard redundancy consists of primary and backup redundant FCUs. The primary FCU maintains data connections with IO hardware and gateways.

The backup FCU receives data values from the primary and monitors its availability. In normal operation, the backup FCU does not establish data connections to gateways or IO hardware.

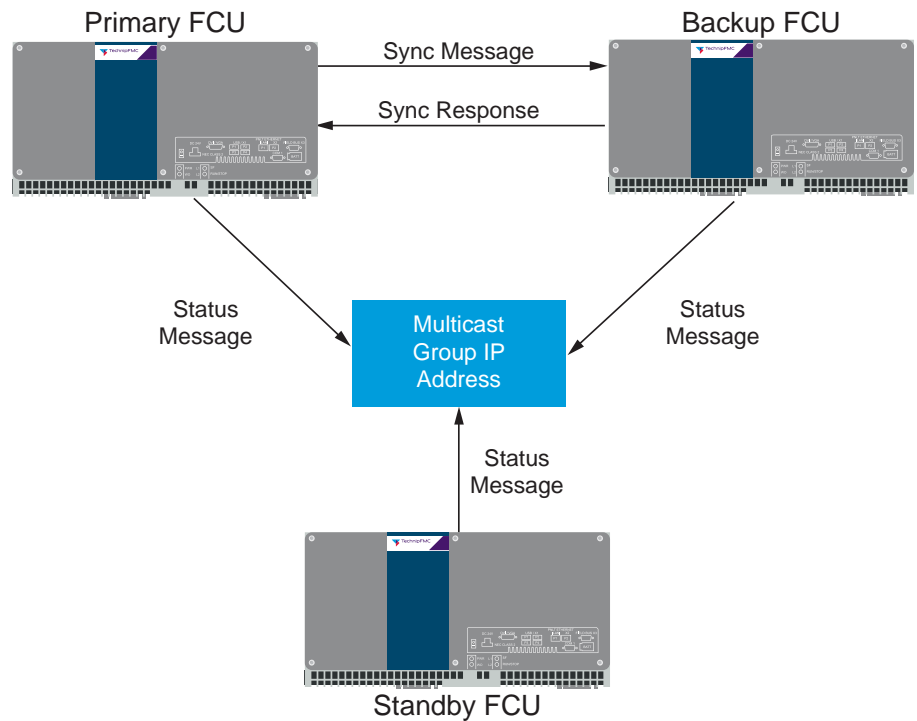
Both FCUs exchange sync messages. If the backup FCU does not receive a sync message within a predetermined time, it establishes connections to gateways and IO hardware, and assumes primary FCU status.



Multi-Redundancy

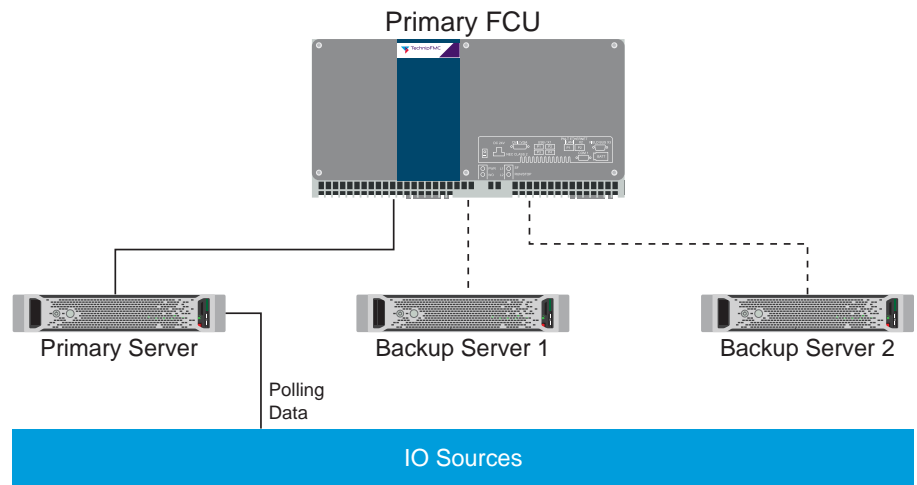
Multi-Redundancy

For multi-redundancy, in addition to the primary and backup FCUs, a standby FCU is present and available to become a replacement backup. The standby FCU can be swapped to assume the backup function if either the current primary or backup FCU fails communications.



Gateway Multi-Redundancy

A single UCOS FCU can support up to 32 backup servers. In multi-redundancy mode, the FCU looks for a keep alive signal from the primary server. The backup servers remain on standby. If the keep alive signal is not detected within a predetermined time, the FCU automatically assigns primary server status to the next available server.





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