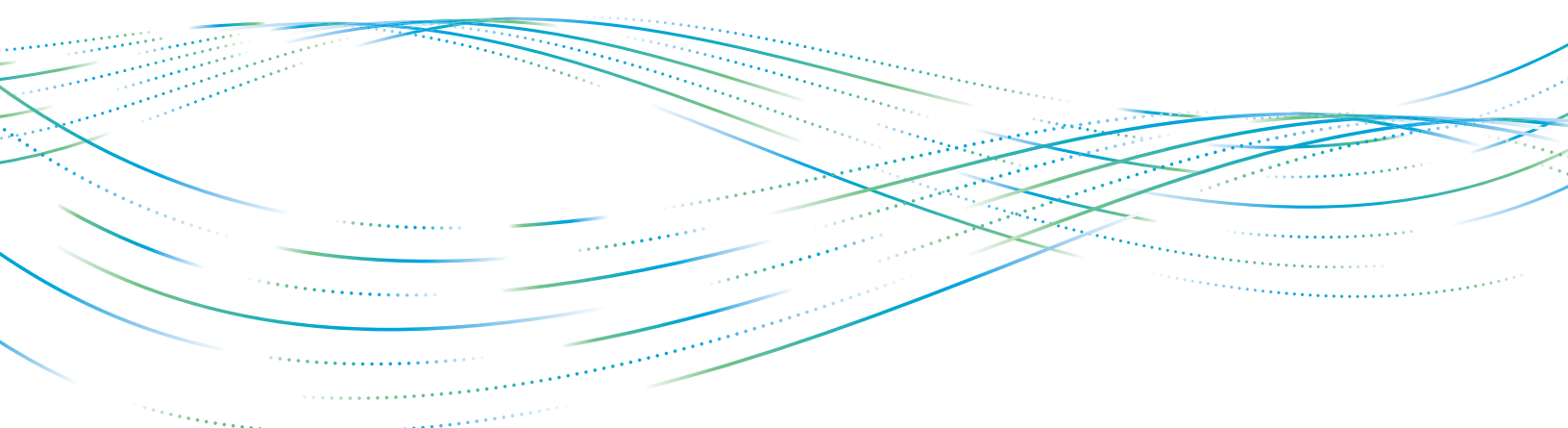


APPLICATION NOTE

63202A-20-XXXX Paralleling

Chroma 63202A Series



The low voltage high current variation of the 63202A-20 does not support M/S Paralleling. Instead, the units have a mode called the Synchronize function (Sync.). This will act similarly to M/S paralleling in that the two loads will begin loading at practically the same time. The Synchronize function does require that each unit’s load be set independently.

The unit is capable of performing all of its operating modes in this Sync. mode. As can be seen below from tables 3-8 and 3-9 from the UM, all the unit’s functions except digitizing are available when in Sync.

Table 3-8 Sync-supported Modes

Mode	Sync.
CC Mode	☐
CR Mode	☐
CV Mode	☐
CP Mode	☐
CCD Mode	☐
OCP/OPP Test	☐
Program	☐
UDW	☐
External Waveform	☐
Short Function	☐

Table 3-9 Sync-supported Functions

Function	Sync.
DIGITIZING	X
TIMING	☐
GO/NG SPEC.	☐
PROTECTION	☐
SAVE/RECALL	☐

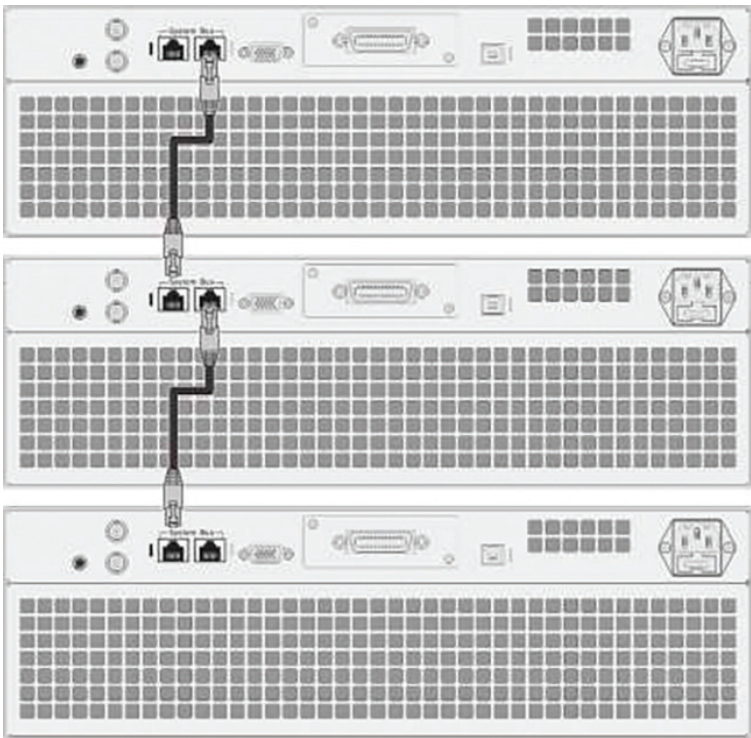
System Bus

To connect the units in parallel using this function, there are two external connections that need to be made. First the system bus cable needs to be connected between the two units. This is a standard RJ45 – RJ45 cable that will be provided in the accessory kit.

				
W38-034000 USB*1	W31-422009 Network cable system bus*2	W38-001049 Red/Black test wire *1	H61-501550 Screw M5x15L*56	N22-000034 D-SUB 3-row 15P*2
				
W34-000903 BNC*2	G29-000034 Connector cover *2	G32-005010 Mounting bracket (USB)*1	G32-005011 Mounting bracket (RJ45)*2	G29-000179 Output protective cover *2

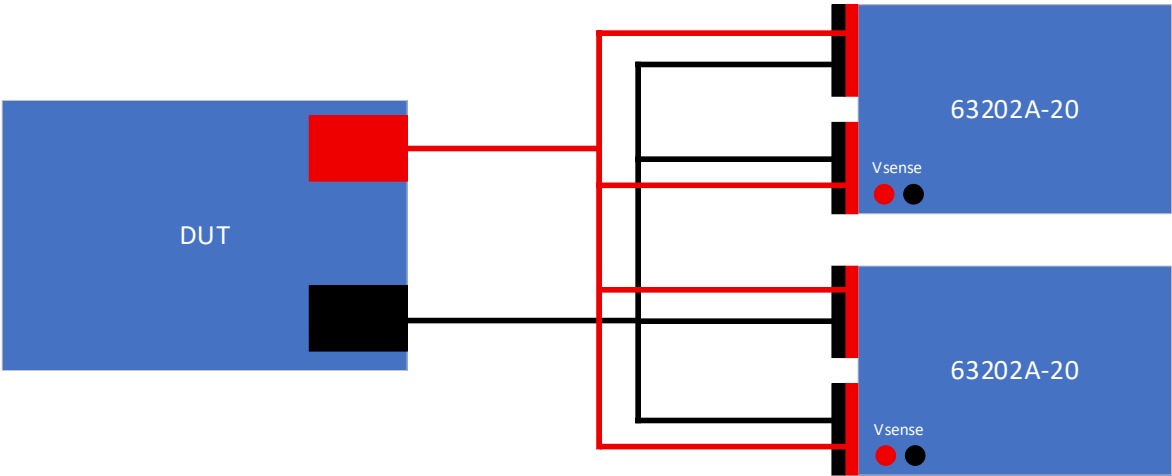
System Bus *(Continued)*

This is a daisy chained setup, output on the right, input on the left. This allows for many units to be connected in parallel if needed.



Load Cables

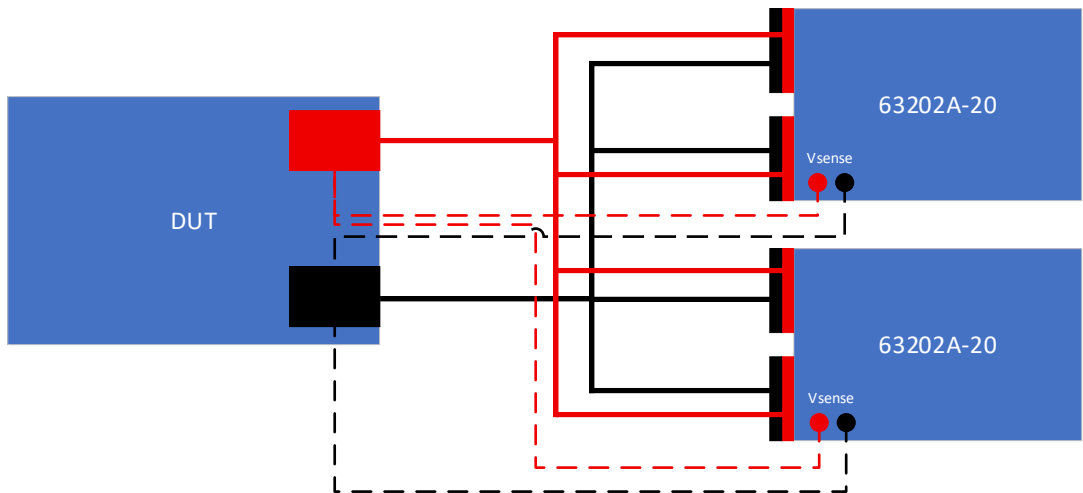
The second connection would of course be the parallel loading cables. This will be the same as a standard parallel setup seen below.



Voltage Sense

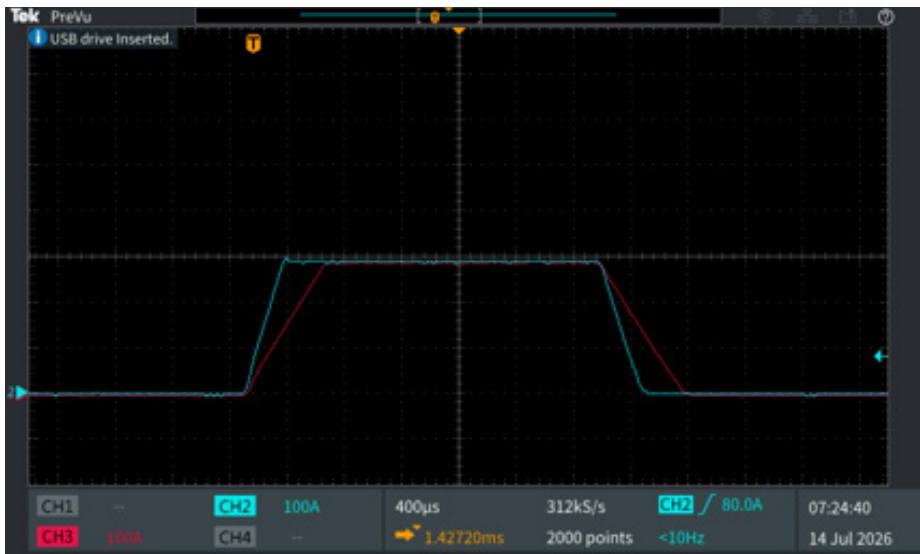
The voltage sense terminals can be connected out to the DUT. This will allow our unit to measure directly at the source ignoring the voltage drop in the cables. If using the voltage sense cables, each unit will need to connect their voltage sense terminals to the DUT. This is useful for operating modes like CP or CR that rely on a voltage measurement to calculate the current load.

Note: The minimum operating voltage applies to the voltage at our load’s terminals, not the DUTs.



Slew Rate

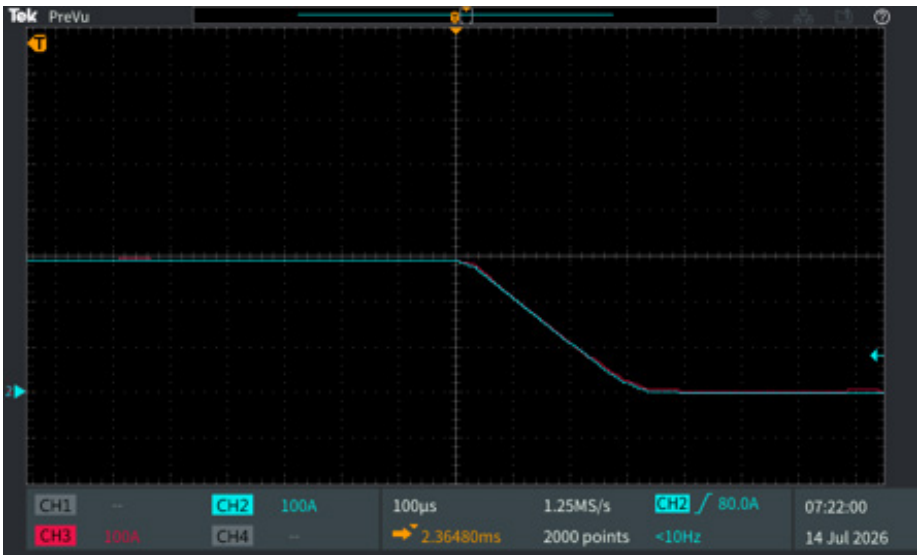
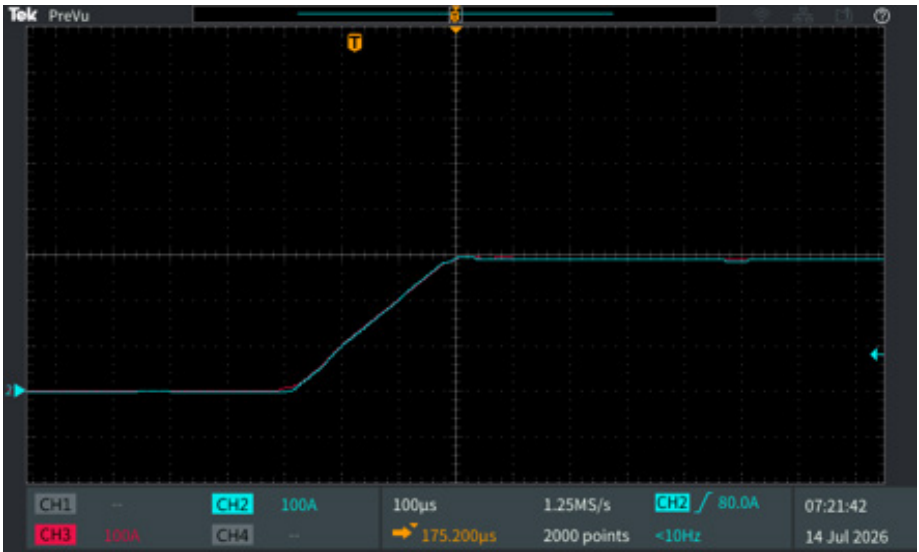
Each unit will draw an independent load from the DUT source. Each of these loads will have its own slew rate setting. Due to this, the effective slew rate of a Sync'd group of units would be the sum of each of their slew rates. As can be seen below, the units will still turn on and off at the same times but can have separate ramp rates.



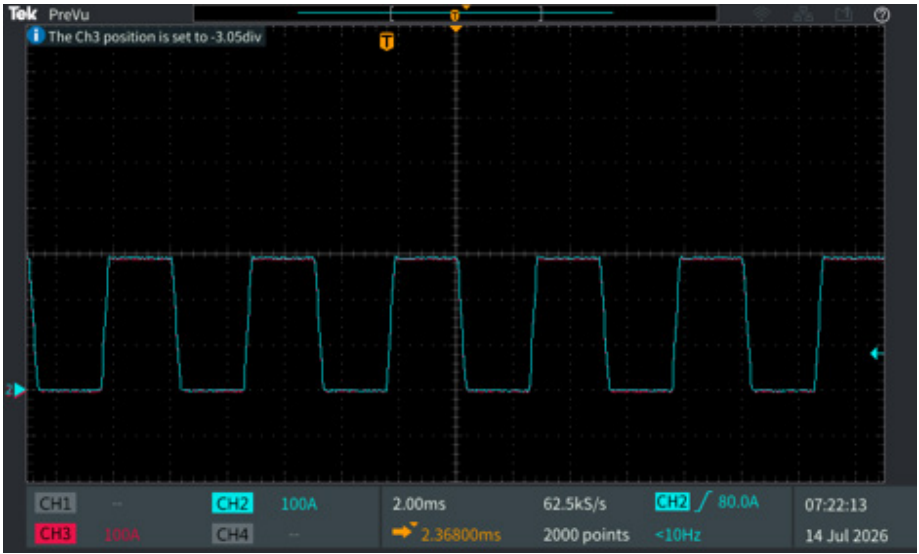
Examples

Below are some examples of 2x63202A-20-1000 units operating in this Sync. mode.

Rise/Fall Times: Slew rate on each unit – 1A/us, 5A to 300A step



Dynamic Loading:



Profile Loading:

