# V9 series optional units GUR-xx lineup

Issue No. 86 July 2016

Full lineup of GUR-xx, V9 series optional units for Video/RGB, has been available. They are used for the image processing apparatus or the monitor for PCs.

#### Lineup

We provide fulfilling lineup, 6 types of units.

Model name	Functions	Release date
GUR-00	Video input 4CH	May, 2016
GUR-01	RGB input 1CH	Feb, 2015
GUR-02	RGB output 1CH	Feb, 2015
GUR-04	Video input 1CH	Feb, 2015
GUR-10	Video input 2CH + RGB input 1CH	May, 2016
GUR-11	RGB input 2CH	May, 2016



Photo: GUR-04

## **Application examples**

#### Monitor for the image processing apparatus

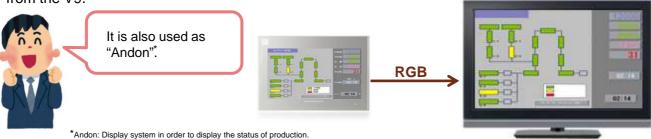
V9 series can be used as a monitor of the image processing apparatus by attaching units for RGB input or video input. Also, V9 series can monitor the image processing apparatus and display the screen from PCs at the same time by using multi-channel units such as GUR-10, the unit for video input + RGB input.



A schematic view for the simultaneous display for video and RGB

#### **Display on the large-screen LCD monitor**

It is possible to display the screen of V9 on the LCD monitor by attaching GUR-02 for RGB output from the V9.



## An application example

#### Surveillance monitor for machinery

It is possible to display footage from the maximum of 4 analog cameras at the same time by using GUR-00 (Video input 4CH). It is used for various purposes such as safety confirmation for production lines.



A schematic view for the simultaneous display for video 4CH

## Performance comparison with our previous products (image processing

An image processing ability of V9 series is better than that of V8 series.

Model name	Function		V8 series		V9 series				
			1CH	2CH at the same time	4CH at the same time	1CH	2CH at the same time	4CH at the same time	
V8 : GU-00 V9 : GUR-00	Video input 4CH			30fps	9-13fps	3-5fps	30fps	30fps	30fps
V8 : GU-01 V9 : GUR-01	RGB input 1CH		60fps	-	-	60fps	-	-	
V8 : GU-10 V9 : GUR-10	Video input 2CH RGB input 1CH	Only v	video	30fps	9-13fps	-	30fps	30fps	-
		Only RGB		60fps	-	-	60fps	-	-
		Video	Video	10-13fps	5-7fps	-	30fps	30fps	-
			RGB	25-29fps	20-22fps	-	30fps	30fps	-
V8 : GU-11 V9 : GUR-11	RGB input 2CH			60fps	25-29fps	-	60fps	30fps	-

<sup>\*</sup> Video + RGB are the condition that RGB 1CH and video 1CH/2CH are displayed at the same time on V9.

Fps: Frame per second

## Product lineup comparison with other brands



\*As of April, 2016, according to our survey

Model name	Brands	Hakko	Brand A	Brand B	Brand C	Brand D
GUR-00	Video input 4CH	V	<b>V</b>	<b>V</b>	V	<b>V</b>
GUR-01	RGB input 1CH	<b>V</b>		<b>V</b>	V	
GUR-02	RGB output 1CH	V		V	V	
GUR-04	Video input 1CH	<b>V</b>		<b>V</b>	V	
GUR-10	Video input 2CH + RGB input 1CH	V		V		V
GUR-11	RGB input 2CH	V		<b>V</b>		

# Hakko Electronics Co., Ltd.